

**AUTHORIZATION TO DISCHARGE UNDER THE  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et seq., the "Act"),

U.S. Fish and Wildlife Service  
Alchesay National Fish Hatchery  
P.O. Box 398  
White River, Arizona 85941

is authorized to discharge effluent from Outfall Number 003 from the Alchesay National Fish Hatchery in Navajo County, Arizona, to the North Fork White River at:

Discharge No.	Latitude	Longitude
003	+33° 56' 00" N	- 109° 55' 40 W

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein, and in the attached 16 pages of EPA Region 9 "Standard Federal NPDES Permit Conditions," dated May 10, 1990.

This permit shall become effective on July 1, 2008 .

This permit and the authorization to discharge shall expire at midnight June 30, 2013 .

Signed this 26 th day of June, 2008 .

For the Regional Administrator

/Signed Nancy Woo for/

Alexis Strauss, Director  
Water Division

I. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS for Outfall 003, are based on an average flow of 54, 504 m<sup>3</sup>/day (14.4 MGD):

A. The permittee is authorized to discharge from Outfall 003 as specified below:

Effluent Characteristic	Maximum Discharge Limitations				Monitoring Requirements	
	Mass limits (kg/day)		Concentration limits (mg/L)			
	Average Monthly	Daily Maximum	Average Monthly	Daily Maximum	Monitoring Frequency	Sample Type
Flow (MGD) <sup>(1)</sup>	N/A <sup>(2)</sup>	N/A <sup>(2)</sup>	N/A <sup>(2)</sup>	N/A <sup>(2)</sup>	Twice/ month	Continuous
Total Suspended Solids (Gross) <sup>(3)</sup>	545 <sup>(3)</sup> kg/day	818 <sup>(3)</sup> kg/day	10 mg/l <sup>(3)</sup>	15 mg/l <sup>(3)</sup>	Twice/ month	Composite
Total Suspended Solids (Net) <sup>(4)</sup>	545 <sup>(4)</sup> kg/day	818 <sup>(4)</sup> kg/day	10 mg/l <sup>(4)</sup>	15 mg/l <sup>(4)</sup>	Twice/ month	Composite
Total Phosphorus	5.5	44	0.10 mg/l	0.8 mg/l	Once / 3 months	Composite
Total Nitrogen	N/A <sup>(2)</sup>	N/A <sup>(2)</sup>	N/A <sup>(2)</sup>	N/A <sup>(2)</sup>	Once / 3 months	Composite
Total Ammonia (as N) <sup>(5) (6)(7)</sup>	65 kg/day <sup>(6)</sup>	390 kg/day <sup>(6)</sup>	1.20 mg/l <sup>(6)</sup>	7.30 mg/l <sup>(6)</sup>	Once / 3 months	Composite
	120 kg/day <sup>(7)</sup>	530 kg/day <sup>(7)</sup>	2.30 mg/l <sup>(7)</sup>	9.90 mg/l <sup>(7)</sup>		
Temperature	N/A <sup>(2)</sup>	N/A <sup>(2)</sup>	N/A <sup>(2)</sup>	N/A <sup>(2)</sup>	Twice / month	Grab
pH	Not less than 6.5 standard units nor greater than 9.0 standard units.				Twice / month	Grab

(1) MGD = Million gallons per day.

(2) N/A = Not Applicable. Only monitoring and reporting required.

(3) Gross Limitations only apply when the concentration of suspended solids in the influent does not exceed daily maximum permit concentration limits.

(4) Net limitations only apply when the concentration of suspended solids in the influent exceeds daily maximum permit concentration limits. The net concentration shall be calculated by subtracting the suspended solids concentration in the influent from the suspended solids concentration in the effluent, then compare net amount against permit limits. Report computation method used to derive suspended solids values in an addendum to the DMR.

(5) The term "total ammonia" refers to the sum of dissolved un-ionized ammonia, represented as NH<sub>3</sub>, and the ionized form, represented as NH<sub>4</sub><sup>+</sup>. Total ammonia limits based on pH 7.75 and 1.0° C

temperature for winter, and 22.00° C temperature for summer according to Appendix A (WMAT Total Ammonia, Coldwater Habitat: Acute and Chronic Standards).

(6) Summer is defined as: May 1 through September 31

(7) Winter is defined as: October 1 through April 30

---

## II. OTHER LIMITATIONS AND REQUIREMENTS

A. Tribal waters shall be free of contaminants in such quantity and duration as may, with reasonable probability, injure human health, animal or plant life, or property, or unreasonably interfere with the public welfare or the use of property. In addition, the following narrative standards apply to all Tribal Waters, unless stricter standards are imposed.

1. **BOTTOM DEPOSITS.** The bottoms of all Tribal waters shall be free from water contaminants from other than natural causes that will settle and cause deleterious effects to the aquatic biota, including fish, or significantly alter the physical or chemical properties of the bottom.
2. **FLOATING SOLIDS, OIL, AND GREASE.** All waters shall be free from visible oils, scum, foam, grease and other floating materials and suspended substances of a persistent nature resulting from other than natural causes.
3. **COLOR.** Materials producing true color resulting from other than natural causes shall not create an aesthetically undesirable condition; nor shall color impair the attainable uses of the water or harm aquatic life.
4. **ODOR AND TASTE.** Water contaminants from other than natural causes shall be limited to concentrations that will not impart unpalatable flavor to fish, result in offensive odor or taste arising from the water, or otherwise interfere with the existing and attainable uses of the water, nor shall taste and odor-producing substances of other than natural origin interfere with the production of a potable water supply by modern treatment methods.
5. **NUISANCE CONDITIONS.** Nutrients or other substances stimulating algal growth from other than natural causes shall not be present in concentrations that will produce objectionable algal densities, nuisance aquatic vegetation, result in a dominance of nuisance species instream, or otherwise cause nuisance conditions.
6. **TURBIDITY.** Turbidity attributable to other than natural causes shall not reduce light transmission to the point that the aquatic biota is inhibited or that will cause an unaesthetic and substantial visible contrast with the natural appearance of the water. Specifically, turbidity shall not exceed 5 NTU over background when background turbidity is 50 NTU or less. When background turbidity is more than 50 NTU, there shall not be more than a 10% increase in turbidity. Background turbidity may be estimated by measuring levels upstream of the human-caused impacts or during zero runoff periods (greater than five (5) days after most recent event).
7. **TEMPERATURE.** The introduction of heat by other than natural causes shall not increase temperature outside mixing zones by more than 2.0<sup>0</sup> C (5<sup>0</sup> F), based upon the monthly average of the maximum daily temperatures measured at mid-depth or three feet (whichever is less) outside the mixing zone. Normal daily and seasonal variations of temperature that were present before the addition of heat from other than

natural sources shall be maintained. In no case shall heat of artificial origin be permitted when the maximum temperature specified for the reach would thereby be exceeded. High water temperatures caused by unusually high ambient air temperatures are not violations of these standards. In cases where dissolved oxygen levels are within 0.5 mg/l of the limit, no increases in temperature will be allowed.

8. SALINITY/MINERAL QUALITY (total dissolved solids, chlorides, and sulfates). Existing mineral concentrations shall not be altered by municipal, industrial, or instream activities, or other waste discharges that would interfere with established designated uses. No increase exceeding 1/5 of naturally-occurring levels shall be permitted.
  9. pH. The pH of a stream or a lake shall not fluctuate in excess of 1.0 pH unit over a period of 24 hours for other than natural causes and shall be within a range of 6.5-9.0.
  10. DISSOLVED OXYGEN. If a surface water body is capable of supporting aquatic life, dissolved oxygen concentration shall be maintained at a minimum of 6.0 mg/l.
  11. TOXIC SUBSTANCES. Toxic substances, including, but not limited to pesticides, herbicides, heavy metals, and organic chemicals, shall not be present in Tribal waters above those levels identified in 40 CFR section 131.36 as toxic to human, animal, plant, or aquatic life, or to interfere with the normal propagation, growth, and survival of the aquatic biota, including fish. There shall be no acute toxicity. At the edge of the mixing zones there shall be no chronic toxicity.
- B. Reopener - This permit may be modified in accordance with the requirements set forth at 40 CFR Parts 122 and 124, to include appropriate conditions or limits to address demonstrated effluent toxicity based on newly available information, or to implement any EPA-approved new State or Tribal water quality standards.

### III. MONITORING AND REPORTING

- A. Sample locations - Samples taken in compliance with the monitoring requirements specified in Part I, Section A, above, shall be taken at the following location(s):
1. Influent samples shall be taken after the last addition to the collection system prior to treatment.
  2. Effluent samples shall be taken downstream from the last treatment process prior to discharge into receiving waters.
- B. Reporting of Monitoring Results

1. Monitoring results obtained during the month shall be submitted on forms to be supplied by the Regional Administrator, to the extent that the information reported may be entered on the forms. The results of all monitoring required by this permit shall be submitted in such a format as to allow direct comparison with the limitations and requirements of the permit. Unless otherwise specified, discharge flows shall be reported in terms of the average flow over each monthly period and the maximum daily flow over that monthly period. If there is no discharge during the month, the reporting form shall be marked "No Discharge" and submitted in accordance with this section. Each monthly report is due by the 28th of the following month, i.e. January report is due by February 28. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the Regional Administrator and the White Mountain Apache Tribe at the following addresses:

U.S. EPA, Region 9  
NPDES/DMR                      Mailcode: WTR-7  
75 Hawthorne Street  
San Francisco, CA 94105-3901  
Telephone: (415) 744-1905

Environmental Planning Office  
White Mountain Apache Tribe  
P.O. Box 1000  
Whiteriver, AZ 85941  
Telephone: (520) 338-4346 ext. 223  
Attn: Brenda Begay

2. Where quarterly monitoring is required for a continuous discharge, samples shall be taken during the months of January, April, July and October.

C. Monitoring and Records

In addition to the information requirements specified under 40 CFR 122.41(j)(3), records of monitoring information shall include: The laboratory(ies) which performed the analyses and any comment, case narrative, or summary of results produced by the laboratory. These should identify and discuss QA/QC analyses performed concurrently during sample analyses and whether project and 40 CFR 136 requirements were met. The summary of results must include information on initial and continuing calibration, surrogate analyses, blanks, duplicates, laboratory control samples, matrix spike and matrix spike duplicate results; and sample receipt condition, holding time, and preservation.

D. Twenty-Four Hour Reporting of Noncompliance

The permittee shall report any noncompliance which may endanger human health or the environment. This information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances to the following persons or their offices:

If the permittee is unsuccessful in contacting the persons above, the permittee shall report by 9 a.m. on the first business day following the noncompliance. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including dates and times, and, if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

#### IV. SPECIAL CONDITIONS

The permittee shall perform and document the following activities:

A. Solids control. The permittee must:

1. Employ efficient feed management and feeding strategies that limit feed input to the minimum amount reasonably necessary to achieve production goals and sustain targeted rates of aquatic animal growth in order to minimize potential discharges of uneaten feed and waste products to waters of the U.S.
2. In order to minimize the discharge of accumulated solids from settling ponds and basins and production systems, identify and implement procedures for routine cleaning of rearing units and off-line settling basins, and procedures to minimize any discharge of accumulated solids during the inventorying, grading and harvesting aquatic animals in the production system.
3. Remove and dispose of aquatic animal mortalities properly on a regular basis to prevent discharge to waters of the U.S., except in cases where the permitting authority authorizes such discharge in order to benefit the aquatic environment.

B. Materials storage. The permittee must:

1. Insure proper storage of drugs, pesticides, and feed in a manner designed to prevent spills that may result in the discharge of drugs, pesticides or feed to waters of the U.S.
2. Implement procedures for properly containing, cleaning, and disposing of any spilled material.

C. Structural maintenance. The permittee must:

1. Inspect the production system and the wastewater treatment system on a routine basis in order to identify and promptly repair any damage.
2. Conduct regular maintenance of the production system and the wastewater treatment system in order to ensure that they are properly functioning.

D. Recordkeeping. The permittee must:

1. In order to calculate representative feed conversion ratios, maintain records for aquatic animal rearing units documenting the feed amounts and estimates of the numbers and weight of aquatic animals.
2. Keep records documenting the frequency of cleaning, inspections, maintenance and repairs.

E. Training. The permittee must:

1. In order to ensure the proper clean-up and disposal of spilled material adequately train all relevant facility personnel in spill prevention and how to respond in the event of a spill.
2. Train staff on the proper operation and cleaning of production and wastewater treatment systems including training in feeding procedures and proper use of equipment.

F. Chemical Usage. The permittee must:

1. Submit annually by January 31<sup>st</sup> each year a list of all chemicals added to water in the fish hatchery during the preceding year.
2. The chemical list shall include antibiotics, fungicides, detergents, and other cleaning agents, disinfectants and any other chemicals added to the water. The submittal shall include information on frequency and duration of use, purpose, and amounts.

V. STANDARD DEFINITIONS

1. COMPOSITE SAMPLE means, for flow rate measurements, the arithmetic mean of no fewer than eight (8) individual measurements taken at equal intervals for eight (8) hours or for the duration of discharge, whichever is shorter. A composite sample means, for other than flow rate measurement, a combination of eight (8) individual portions obtained at equal time intervals for eight (8) hours or for the duration of the discharge, whichever is shorter. The volume of each individual portion shall be directly proportional to the discharge flow rate at the time of sampling. The sampling period shall coincide with the period of maximum discharge flow.
2. DAILY MAXIMUM CONCENTRATION means the measurement made on any single discrete sample or composite sample.
3. DAILY MAXIMUM MASS LIMIT means the total discharge by mass during any calendar day. Daily maximum mass limits are calculated by using the flow rate from the day the sample was taken.
4. GRAB sample means any individual sample collected in less than 15 minutes.
5. MONTHLY OR WEEKLY AVERAGE CONCENTRATION means the arithmetic mean of consecutive measurements made during calendar month or weekly period, respectively.
6. MONTHLY OR WEEKLY AVERAGE MASS LIMITATION means the total discharge by mass during a calendar monthly or weekly period, respectively,



divided by the number of days in the period that the facility was discharging. Where less than daily sampling is required by this permit, the monthly or weekly average value shall be determined by the summation of all the measured discharges by mass divided by the number of days during the monthly or weekly period when the measurements were made.